

Claims

1. A device for testing at least one quality parameter of a fluid in fluid devices such as working cylinders (10), hydraulic accumulators, valves, filter housings, flexible pressure tubing at least periodically receiving a specified volume of fluid into at least one fluid space (12, 14), which volume may after leaving the fluid device be stored by means of a control device (16) in a storage device (18, 20) and then moved further from such storage device (18, 20) to a measurement device (22, 24) for the purpose of determining the respective quality parameter of the fluid.
2. The device as claimed in claim 1, wherein the storage device (16, 18) is in the form of a working cylinder, especially in the form of a pneumatic cylinder, which may be connected on the piston side by way of a feed line (26) to the fluid space (12, 14) associated with it of the fluid device by means of the control device (16) and wherein the measurement device (22, 24) is mounted downstream from the working cylinder in the direction of flow of the fluid in a drain line (28).
3. The device as claimed in claim 2, wherein the working cylinder has a piston rod (32) with a through fluid conducting passage which discharges on one side into the piston space (34) of the working cylinder and on its other side into a connecting line (36) which may be blocked by the control device (16).
4. The device as claimed in claim 2 or 3, wherein the rod side of the working cylinder may be connected to an actuating device such as an electrically and/or hydraulically operated supply source or to a compressed gas source (40), a compressed air or nitrogen source in particular, and wherein the movement of displacement of the piston (42), in particular

such movement relating to the end positions of such piston, may be determined by a monitoring device (44).

5. The device as claimed in claim 4, wherein the control unit (16) actuates switching valves (46, 48), in particular 2/2-way switching valves, for clearing or blocking the feed line (26) and the connecting line (36) and wherein the control device (16) also takes the output signals of the monitoring device (44) into consideration for the purpose of the respective actuation of the switching valves (46, 48).
6. The device as claimed in claim 5, wherein a pressure control valve (50) is connected to the feed line (26) to the working cylinder, between such working cylinder and the associated switching valve (46) of the control device (16).
7. The device as claimed in one of claims 1 to 6, wherein a separate storage device (18, 20) with measurement device (22, 24) is provided for each fluid space (18, 20).
8. The device as claimed in one of claims 1 to 7, wherein the measurement device (22, 24) determines in particular the size and/or the number and/or the speed and/or the type of particles present in the fluid and/or quality parameters such as viscosity, aging, temperature, pH value, or the electric conductivity of the fluid.
9. The device as claimed in claim 7 or 8, characterized in that the fluid device is a hydraulic working cylinder (10) which may be connected both by its piston side and by its rod side to the pneumatic working cylinder and to the associated measurement device (22, 24) and in that the control device (16) makes possible replacement of the hydraulic working cylinder (10) with a new such cylinder to be tested, while determination of the quality of the fluid is effected in the respective fluid space (12, 14).